WD Caviar® Blue™

Desktop Hard Drives

WD Caviar Blue hard drives are available with either SATA or PATA interface in a variety of cache sizes with a multitude of available features to deliver rock solid performance and ultra-cool and quiet operation perfect for family and business computing.

INTERFACES

SATA 6 Gb/s and 3 Gb/s
PATA 100 MB/s

WIDTH/HEIGHT

3.5-inch/1-inch

ROTATIONAL SPEED

7200 RPM

CAPACITIES

80 GB to 1 TB

MODEL NUMBERS

SATA 6 Gb/s	*SATA 3 Gb/s*		*PATA 100 MB/s*
WD10EALX	WD10EALS	WD2500AAKS	WD5000AAKB
WD7500AALX	WD6400AAKS	WD2500AAJS	WD3200AAJB
WD5000AAKX	WD5000AAKS	WD1600AAJS	WD2500AAJB
WD3200AAKX	WD3200AAKS	WD800AAJS	WD1600AAJB
WD2500AAKX	WD3200AAJS		WD800AAJB

Note: Not all products may be available in all regions of the world.

Product Features

Solid performance

With SATA and PATA interfaces, and cache sizes up to 32 MB, this series of drives offers a full range of performance features.

Ultra-cool and quiet

Keeping the drive cool enhances reliability. WD continues to develop new and innovative ways to keep drives cool while they are operating which helps protect the drive and the data stored on it.

Capacity

WD Caviar Blue drives are available in capacities from 80 GB to 1 TB because you can never have too much storage space.

NoTouch™ ramp load technology

The recording head never touches the disk media ensuring significantly less wear to the recording head and media as well as better drive protection in transit.

IntelliSeek™

Calculates optimum seek speeds to lower power consumption, noise and vibration.

ShockGuard™

Instantaneously protects the hard drive against damage from bumps and vibrations while it is running. This technology enables WD Caviar drives to achieve industry-leading shock specifications.

Applications

- Family and business computing.
- Desktop / Consumer RAID Environments - WD Caviar Blue Hard Drives are tested and recommended for use in consumer-type RAID applications (RAID-0 / RAID-1).
  - Business Critical RAID Environments – WD Caviar Blue Hard Drives are not recommended for and are not warranted for use in RAID environments utilizing Enterprise HBAs and/or expanders and in multi-bay chassis, as they are not designed for, nor tested in, these specific types of RAID applications. For all Business Critical RAID applications, please consider WD's Enterprise Hard Drives that are specifically designed with RAID-specific, time-limited error recovery (TLER), are tested extensively in 24x7 RAID applications, and include features like enhanced RAFF technology and thermal extended burn-in testing.

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Specifications[1]	1 TB	750 GB	640 GB	500 GB	500 GB	320 GB	320 GB
Model number	WD10EALX WD10EALS	WD7500AALX	WD6400AAKS	WD5000AAKX WD5000AAKS	WD5000AAKB	WD3200AAKX	WD3200AAKS WD3200AAJS
Interface	SATA 6 Gb/s (EALX) SATA 3 Gb/s (EALS)	SATA 6 Gb/s	SATA 3 Gb/s	SATA 6 Gb/s (AAKX) SATA 3 Gb/s (AAKS)	PATA 100 MB/s	SATA 6 Gb/s	SATA 3 Gb/s
Formatted capacity	1,000,204 MB	750,156 MB	640,135 MB	500,107 MB	500,107 MB	320,072 MB	320,072 MB
User sectors per drive	1,953,525,169	1,465,149,168	1,250,263,728	976,773,168	976,773,168	625,142,448	625,142,448
SATA latching connector	Yes	Yes	Yes	Yes	No	Yes	Yes
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
RoHS compliant[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Performance							
Data transfer rate (max)							
Buffer to host	6 Gb/s (WD10EALX) 3 Gb/s (WD10EALS)	6 Gb/s	3 Gb/s	6 Gb/s (WD5000AAKX) 3 Gb/s (WD5000AAKS)	100 MB/s[3]	6 Gb/s	3 Gb/s
Host to/from drive (sustained)	126 MB/s	126 MB/s	126 MB/s	126 MB/s	126 MB/s	126 MB/s	126 MB/s
Cache (MB)	32	32	16	16	16	16	16 (WD3200AAKS) 8 (WD3200AAJS)
Rotational speed (RPM)	7200	7200	7200	7200	7200	7200	7200
Reliability/Data Integrity							
Load/unload cycles[4]	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}
Limited warranty (years)[5]	3	3	3	3	3	3	3
Power Management							
12VDC peak (A, ±10%)	2.8	2.8	1.375	1.77	1.375	1.77	1.77
Average power requirements (W)							
Read/Write	7.3	7.3	8.3	6.0	8.3	6.0	5.36
Idle	6.1	6.1	7.7	5.6	7.7	5.6	4.92
Standby	0.7	0.7	1.0	0.9	1.0	0.9	0.73
Sleep	0.7	0.7	1.0	0.9	1.0	0.9	0.73
Environmental Specifications[6]							
Temperature (°C)							
Operating	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60	0 to 60
Non-operating	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 70	-40 to 65
Shock (Gs)							
Operating (2 ms, read/write)	30	30	30	30	30	30	30
Operating (2 ms, read)	65	65	65	65	65	65	65
Non-operating (1 ms)	300	300	300	350	300	350	350
Average acoustics (dBA)[7]							
Idle mode	28	28	25	29	25	29	29
Performance seek mode	33	33	29	30	29	30	30
Physical Dimensions							
Height (in./mm, max)	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	1.52/0.69	1.52/0.69	1.32/0.60	0.99/0.45	1.32/0.60	0.99/0.45	0.95/0.43

[1] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

[2] WD hard drive products manufactured and sold worldwide after June 1, 2006, meet or exceed Restriction of Hazardous Substances (RoHS) compliance requirements as mandated by the European Union for electrical and electronic products. The RoHS Directive 2002/95/EC of the European Parliament, which is effective in the EU beginning July 1, 2006, aims to protect human health and the environment by restricting the use of certain hazardous substances in new equipment, and consists of restrictions on lead, mercury, cadmium, and other substances.

[3] Maximum burst rate running the Mode 5 Ultra ATA transfer mode.

[4] Controlled unload at ambient condition.

[5] The term of the limited warranty may vary by region. Visit http://support.wdc.com/warranty for details.

[6] No non-recoverable errors during operating tests or after non-operating tests.

[7] Sound power level.

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Specifications[1]	320 GB	250 GB	250 GB	250 GB	160 GB	160 GB	80 GB	80 GB
Model number	WD3200AAJB	WD2500AAKX	WD2500AAKS WD2500AAJS	WD2500AAJB	WD1600AAJS	WD1600AAJB	WD800AAJS	WD800AAJB
Interface	PATA 100 MB/s	SATA 6 Gb/s	SATA 3 Gb/s	PATA 100 MB/s	SATA 3 Gb/s	PATA 100 MB/s	SATA 3 Gb/s	PATA 100 MB/s
Formatted capacity	320,072 MB	250,059 MB	250,059 MB	250,059 MB	160,041 MB	160,041 MB	80,026 MB	80,026 MB
User sectors per drive	625,142,448	488,397,168	488,397,168	488,397,168	312,581,808	312,581,808	156,301,488	156,301,488
SATA latching connector	No	Yes	Yes	No	Yes	No	Yes	No
Form factor	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
RoHS compliant[2]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Performance								
Data transfer rate (max) Buffer to host Host to/from drive (sustained)	 100 MB/s[3] 126 MB/s	 6 Gb/s 126 MB/s	 3 Gb/s 126 MB/s	 100 MB/s[3] 126 MB/s	 3 Gb/s 126 MB/s	 100 MB/s[3] 126 MB/s	 3 Gb/s 126 MB/s	 100 MB/s[3] 126 MB/s
Cache (MB)	8	16	16 (WD2500AAKS) 8 (WD2500AAJS)	8	8	8	8	8
Rotational speed (RPM)	7200	7200	7200	7200	7200	7200	7200	7200
Reliability/Data Integrity								
Load/unload cycles[4]	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Non-recoverable read errors per bits read	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}	<1 in 10^{14}
Limited warranty (years)[5]	3	3	3	3	3	3	3	3
Power Management								
12VDC peak (A, ±10%)	1.77	1.77	1.77	1.77	1.77	1.77	1.77	1.77
Average power requirements (W) Read/Write Idle Standby Sleep	 5.36 4.92 0.73 0.73	 6.0 5.6 0.9 0.9	 5.36 4.92 0.73 0.73	 5.36 4.92 0.73 0.73	 5.36 4.92 0.73 0.73	 5.36 4.92 0.73 0.73	 5.36 4.92 0.73 0.73	 5.36 4.92 0.73 0.73
Environmental Specifications[6]								
Temperature (°C) Operating Non-operating	 0 to 60 -40 to 65	 0 to 60 -40 to 70	 0 to 60 -40 to 65	 0 to 60 -40 to 65	 0 to 60 -40 to 65	 0 to 60 -40 to 65	 0 to 60 -40 to 65	 0 to 60 -40 to 65
Shock (Gs) Operating (2 ms, read/write) Operating (2 ms, read) Non-operating (1 ms)	 30 65 350	 30 65 350	 30 65 350	 30 65 350	 30 65 350	 30 65 350	 30 65 350	 30 65 350
Average acoustics (dBA)[7] Idle mode Performance seek mode	 29 30	 29 30	 29 30	 29 30	 29 30	 29 30	 29 30	 29 30
Physical Dimensions								
Height (in./mm, max)	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4	1.028/25.4
Length (in./mm, max)	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147	5.787/147
Width (in./mm, ± .01 in.)	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6	4/101.6
Weight (lb./kg, ± 10%)	0.95/0.43	0.99/0.45	0.95/0.43	0.95/0.43	0.95/0.43	0.95/0.43	0.95/0.43	0.95/0.43

[1] As used for storage capacity, one megabyte (MB) = one million bytes, one gigabyte (GB) = one billion bytes, and one terabyte (TB) = one trillion bytes. Total accessible capacity varies depending on operating environment. As used for buffer or cache, one megabyte (MB) = 1,048,576 bytes. As used for transfer rate or interface, megabyte per second (MB/s) = one million bytes per second, and gigabit per second (Gb/s) = one billion bits per second. Effective maximum SATA 3 Gb/s transfer rate calculated according to the Serial ATA specification published by the SATA-IO organization as of the date of this specification sheet. Visit www.sata-io.org for details.

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[4] Controlled unload at ambient condition.

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[6] No non-recoverable errors during operating tests or after non-operating tests.

[7] Sound power level.

WD Caviar Blue is part of WD's complete lineup of desktop hard drives.

WD Caviar® Blue™
Desktop Hard Drives
Performance and reliability for everyday computing.

WD Caviar® Green™
Desktop Hard Drives
Cool, quiet, eco-friendly.

WD Caviar® Black™
Desktop Hard Drives
Maximum performance for power computing.

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